

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1 (currently amended): A belt type continuous variable transmission comprising;

- a primary sheave that outputs torque,
- a secondary sheave that receives torque from the primary sheave, and
- a belt entrained between the primary sheave and the secondary sheave in an endless manner to transmit torque to the secondary sheave from the primary sheave, ~~and~~wherein

- the primary sheave comprises;

- a first sheave body,
 - a second sheave body provided to be relatively slidable in a direction toward and away from the first sheave body and forming between ~~it~~the second sheave body and the first sheave body a belt groove, about which the belt is entrained,

- a plurality of push bodies that rotate together with the second sheave body and move radially of the second sheave body according to centrifugal forces generated at the time of rotation of the second sheave body, such movements causing the second sheave body to slide to change a width of the belt groove, and

- a plurality of stoppers that restrict movements of the push bodies by contacting with outer surfaces of the push bodies when the second sheave body reaches a position of minimum transmission gear ratio, in which the belt groove is made smallest in width, the stoppers being shaped to accelerate partial wear of the outer surfaces of the push bodies, wherein

- each of the plurality of push bodies includes a roller weight and at least outer peripheries thereof are lower in hardness than the plurality of stoppers.

Claim 2 (previously presented): The belt type continuous variable transmission according to claim 1, wherein the stoppers are formed on the second sheave body.

Claim 3 (canceled).

Claim 4 (currently amended): The belt type continuous variable transmission according to ~~any one of claims 1 to 3~~claim 1 or claim 2, wherein the respective stoppers comprise a stopper surface opposed to an outer surface of the push body and at least one projection projecting from the stopper surface.

Claim 5 (withdrawn - currently amended): The belt type continuous variable transmission according to ~~any one of claims 1 to 3~~claim 1 or claim 2, wherein the respective stoppers comprise a stopper surface opposed to an outer surface of the push body, and the stopper surface is non-parallel to the outer surface of the push body.

Claim 6 (withdrawn): The belt type continuous variable transmission according to claim 5, wherein the stopper surface comprises a curved surface having a top that projects arcuately toward the outer surface of the push body, and the top of the curved surface contacts with the outer surface of the push body.

Claim 7 (withdrawn): The belt type continuous variable transmission according to claim 5, wherein the push bodies comprise a first corner and a second corner, the stopper surfaces comprise a curved surface being arcuately concave in opposition to the outer surface of the push body, the curved surfaces comprise a first end and a second end spaced from each other, and the first and second ends contact with the first and second corners of the push body.

Claim 8 (currently amended): A belt type continuous variable transmission comprising:

a primary sheave that outputs torque,
a secondary sheave that receives torque from the primary sheave, and
a belt entrained between the primary sheave and the secondary sheave in an endless manner to transmit torque to the secondary sheave from the primary sheave, and wherein

the primary sheave comprises:

a first sheave body,
a second sheave body provided to be relatively slidable in a direction toward and away from the first sheave body and forming between ~~it~~ the second sheave body and the first sheave body a belt groove, about which the belt is entrained,

a plurality of push bodies that rotate together with the second sheave body and move radially of the second sheave body according to centrifugal forces generated at the time of rotation of the second sheave body, such movements causing the second sheave body to slide to change a diameter, at which the belt is entrained about the primary sheave, and

a plurality of stoppers that restrict movements of the push bodies by contacting with outer surfaces of the push bodies when the second sheave body reaches a position of minimum transmission gear ratio, in which a diameter, at which the belt is entrained, is made largest, the stoppers comprising at least one projection projecting toward the outer surface of the push body, wherein

each of the plurality of push bodies includes a roller weight and at least outer peripheries thereof are lower in hardness than the plurality of stoppers.

Claim 9 (currently amended): The belt type continuous variable transmission according to claim 8, wherein the ~~push bodies comprise a roller weight, and at least outer peripheries thereof~~ of the plurality of push bodies are lower in hardness than the projections of the plurality of stoppers.

Claim 10 (previously presented): The belt type continuous variable transmission

according to claim 1 or 8, wherein the second sheave body comprises a plurality of cam surfaces, with which the push bodies contact, and the stoppers are positioned at ends of the cam surfaces.

Claim 11 (previously presented): The belt type continuous variable transmission according to claim 10, wherein the primary sheave comprises a cam plate opposed to the cam surfaces of the second sheave body and rotating together with the second sheave body, and the push bodies are interposed between the cam surfaces and the cam plate and contact with the stoppers and the cam plate when the second sheave body reaches a position of minimum transmission gear ratio.

Claim 12 (withdrawn - currently amended): A belt type continuous variable transmission comprising:

- a primary sheave that outputs torque,
- a secondary sheave that receives torque from the primary sheave, and
- a belt entrained between the primary sheave and the secondary sheave in an endless manner to transmit torque to the secondary sheave from the primary sheave, and wherein

- the primary sheave comprises:

- a first sheave body,
 - a second sheave body provided to be relatively slidable in a direction toward and away from the first sheave body and forming between it the second sheave body and the first sheave body a belt groove, about which the belt is entrained,
 - a plurality of roller weights that rotate together with the second sheave body and move radially of the second sheave body according to centrifugal forces generated at the time of rotation of the second sheave body, such movements causing the second sheave body to slide to change a diameter, at which the belt is entrained about the primary sheave, and
 - a plurality of stoppers that restrict movements of the roller weights by

contacting with outer surfaces of the roller weights when the second sheave body reaches a position of minimum transmission gear ratio, in which a diameter, at which the belt is entrained, is made largest, the stoppers comprising a plurality of projections projecting toward the outer surface of the roller weight, the projections being spaced from each other in an axial direction of the roller weight, wherein
at least outer peripheries of the plurality of roller weights are lower in hardness than the plurality of stoppers.

Claim 13 (currently amended): A belt type continuous variable transmission comprising;

- a primary sheave that outputs torque,
- a secondary sheave that receives torque from the primary sheave, and
- a belt entrained between the primary sheave and the secondary sheave in an endless manner to transmit torque of the primary sheave to the secondary sheave, ~~and~~ wherein

- the primary sheave comprises;

- a first sheave body,
 - a second sheave body provided to be relatively slidable in a direction toward and away from the first sheave body and forming between ~~it~~ the second sheave body and the first sheave body a belt groove, about which the belt is entrained,

- a plurality of push bodies that rotate together with the second sheave body and move radially of the second sheave body according to centrifugal forces generated at the time of rotation of the second sheave body, such movements causing the second sheave body to slide to change a width of the belt groove, and

- a plurality of stoppers that restrict movements of the push bodies when the second sheave body reaches a position of minimum transmission gear ratio, in which the belt groove is made smallest in width, the stoppers comprising a first contact portion that contacts with the push body when the second sheave body reaches the position of minimum transmission gear ratio, and a second contact portion positioned outside of the

first contact portion radially of the second sheave body, the first contact portion being lower in hardness than the push bodies and the second contact portion.

Claim 14 (previously presented): The belt type continuous variable transmission according to claim 13, wherein the push bodies comprise a roller weight, and at least outer peripheries thereof are lower in hardness than the second contact portions of the stoppers.

Claim 15 (previously presented): The belt type continuous variable transmission according to any one of claims 1, 8, 12, and 13, wherein the belt comprises a plurality of block pieces and a connecting body that connects the block pieces together in an endless manner.

Claim 16 (currently amended): A power unit comprising:
a drive source₁ and
a belt type continuous variable transmission interlocking with the drive source₁,
the belt type continuous variable transmission comprising:
a primary sheave that outputs torque transmitted from the drive source,
a secondary sheave that receives torque from the primary sheave, and
a belt entrained between the primary sheave and the secondary sheave in
an endless manner to transmit torque to the secondary sheave from the primary
sheave, and wherein
the primary sheave comprises:
a first sheave body,
a second sheave body provided to be relatively slidable in a direction
toward and away from the first sheave body and forming between ~~it~~ the second sheave
body and the first sheave body a belt groove, about which the belt is entrained,
a plurality of push bodies that rotate together with the second sheave body
and move radially of the second sheave body according to centrifugal forces generated

at the time of rotation of the second sheave body, such movements causing the second sheave body to slide to change a width of the belt groove, and

a plurality of stoppers that restrict movements of the push bodies by contacting with outer surfaces of the push bodies when the second sheave body reaches a position of minimum transmission gear ratio, in which the belt groove is made smallest in width, the stoppers being shaped to accelerate partial wear of the outer surfaces of the push bodies, wherein

each of the plurality of push bodies includes a roller weight and at least outer peripheries thereof are lower in hardness than the plurality of stoppers.

Claim 17 (previously presented): The power unit according to claim 16, wherein the drive source comprises an engine having a crank shaft and the primary sheave receives torque from the crank shaft to be rotated.

Claim 18 (canceled).

Claim 19 (currently amended): The power unit according to claim ~~18~~16, wherein the respective stoppers comprise a stopper surface opposed to an outer surface of the push body and at least one projection projecting from the stopper surface.

Claim 20 (currently amended): A vehicle comprising:
a frame,
a drive source supported on the frame, and
a belt type continuous variable transmission interlocking with the drive source,
the belt type continuous variable transmission comprising:
a primary sheave that outputs torque transmitted from the drive source,
a secondary sheave that receives torque from the primary sheave, and
a belt entrained between the primary sheave and the secondary sheave in
an endless manner to transmit torque to the secondary sheave from the primary

sheave, and wherein

the primary sheave comprises:

a first sheave body,

a second sheave body provided to be relatively slidable in a direction toward and away from the first sheave body and forming between it ~~the second sheave body~~ and the first sheave body a belt groove, about which the belt is entrained,

a plurality of push bodies that rotate together with the second sheave body and move radially of the second sheave body according to centrifugal forces generated at the time of rotation of the second sheave body, such movements causing the second sheave body to slide to change a width of the belt groove, and

a plurality of stoppers that restrict movements of the push bodies by contacting with outer surfaces of the push bodies when the second sheave body reaches a position of minimum transmission gear ratio, in which the belt groove is made smallest in width, the stoppers being shaped to accelerate partial wear of the outer surfaces of the push bodies, wherein

each of the plurality of push bodies includes a roller weight and at least outer peripheries thereof are lower in hardness than the plurality of stoppers.

Claim 21 (canceled).

Claim 22 (currently amended): The vehicle according to claim 21~~20~~, wherein the respective stoppers comprise a stopper surface opposed to an outer surface of the push body and at least one projection projecting from the stopper surface.

Claim 23 (currently amended): A sheave for continuous variable transmissions, comprising:

a first sheave body,

a second sheave body that forms between it ~~the second sheave body~~ and the first sheave body a belt groove, about which a belt is entrained,

the second sheave body being enabled by a push body, which moves radially of the second sheave body according to centrifugal forces generated at the time of rotation of the second sheave body, to relatively slide in a direction toward and away from the first sheave body, and comprising:

a stopper that restricts movements of the push body by contacting with an outer surface of the push body when slid to a position of minimum transmission gear ratio, in which the belt groove is made smallest in width, the stopper being shaped to accelerate partial wear of the outer surface of the push body, wherein

the push body includes a roller weight and at least an outer periphery thereof is lower in hardness than the stopper.

Claim 24 (previously presented): The sheave for belt type continuous variable transmissions, according to claim 23, wherein the stopper comprises a stopper surface opposed to an outer surface of the push body and at least one projection projecting from the stopper surface.

Claim 25 (previously presented): The sheave for belt type continuous variable transmissions, according to claim 24, wherein the stopper surface and the projection are higher in hardness than the push body.